

Water Infrastructure 101

Identifying and Protecting Our Assets

FBI/EPA Water Infrastructure Protection and Threat Workshop

Laura Flynn, Team Leader

**U.S. EPA Office of Ground Water and Drinking
Water Security Division**

Aaron Levy, Manager of Security Policy

AMWA / WaterISAC

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Overview

- Importance of water
- Drinking water assets
- Wastewater assets
- EPA tools and resources
- Private sector tools and resources

Importance of Water

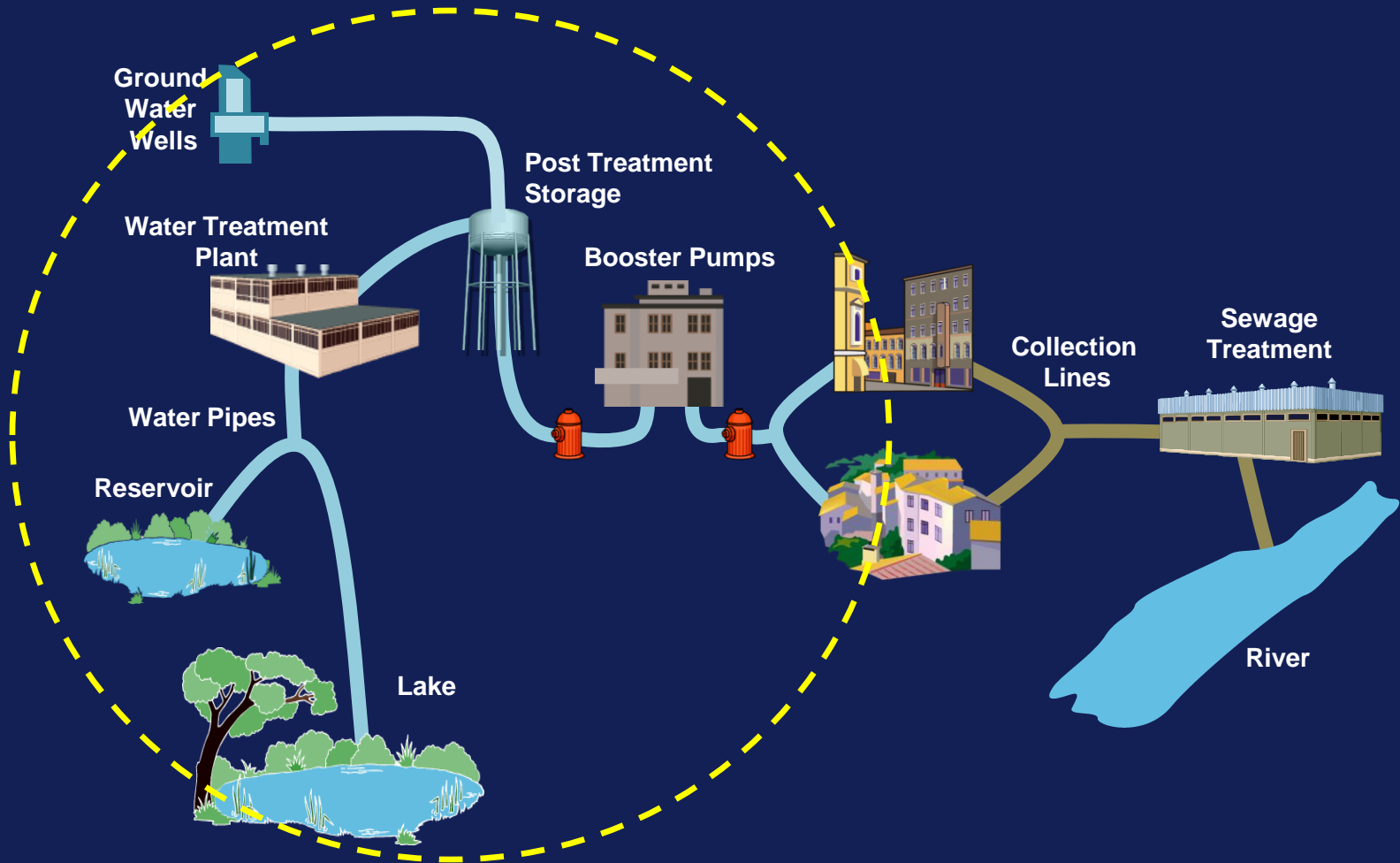
Importance of Water

- Water is the underpinning of life and essential to all critical infrastructure sectors
- Water service disruptions, though rare, can have devastating economic consequences and impact all other critical sectors
 - Emergency preparedness, response, and recovery (e.g., fire suppression)
 - Healthcare
 - Manufacturing
 - Energy
- Understanding critical water interdependencies aids in developing comprehensive plans to protect water assets



Life Cycle of Water

Source → Treatment → Distribution → Collection → Sewer/Treatment → Discharge



Drinking Water Assets

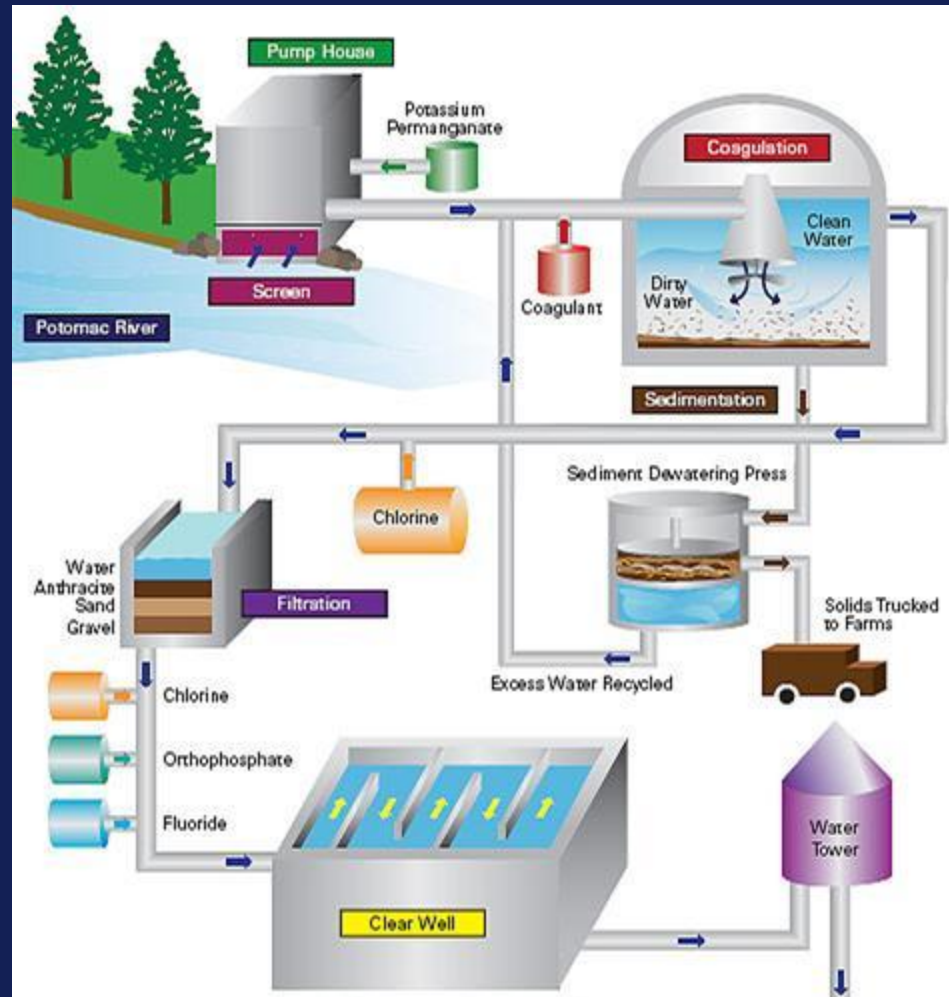
Drinking Water Systems in the U.S.

- 153,000* public (drinking) water systems (aka PWSs)
 - 51,000 community water systems, e.g., residences
 - 18,000 non-transient non-community water systems, e.g., schools
 - 84,000 transient non-community water system, e.g., campgrounds
- Surface water:
 - 12,000 systems serve over 200 million people
 - Serve 66% of the U.S. population
 - Large community water systems obtain their water from surface water sources
- Ground water:
 - 40,000 systems serve 90 million people
 - 10 - 20% of the US population own a well
 - Majority of community water systems serving <10,000 people use ground water



* Numbers rounded

Drinking Water Treatment Facility



Drinking Water Assets

Assets include:

- Water intakes
- Treatment facilities (systems)
- Reservoirs and storage tanks
- Distribution lines
- Pumping stations
- Hydrants and residential/commercial taps
- Cyber control systems
- Treatment chemicals
- Human resources



Drinking Water Intakes

